

## REMARKS

Claims 18-28 and 31-33 are withdrawn as set forth in paragraph 1 of the Official Action.

Claims 8, 9, 16 and 30 were rejected as indefinite pursuant to 35 U.S.C. Section 112. With respect to claims 8 and 9, applicants respectfully direct the Examiner's attention to paragraph 38 of the application wherein the term,  $T_0$ , is defined as the equilibrium temperature. Withdrawal of the rejection with respect to claims 8 and 9 is therefore respectfully requested.

With respect to claim 16 applicants have canceled the claim thus obviating the objection pursuant to 35 U.S.C. Section 112.

Claim 29 has been allowed. Claim 30 has been amended to clarify the subject matter thereof by indicating that the coherent nanodispersed phase is taken from the group consisting of palladium and platinum. Thus, it is believed that the objection pursuant to 35 U.S.C. Section 112 is obviated. Claim 30 is believed allowable in view of the amendments made thereto.

In paragraph 4 of the Official Action and with respect to claims 1, 2, 10 and 16, the Examiner referenced Koizumi et al., "Material Science and Engineering" (reference AH on the 1449 form). The Examiner suggested that this reference teaches a shape memory alloy. That suggestion is in error. At no place within the reference is there a suggestion that the alloy disclosed is a shape memory alloy. This is clear from the description of the use of the materials discussed therein: materials such as jet engine blades and discs. Having a shape memory alloy for such materials or products would lead to a disastrous result.

The shape memory limitation of the present claims is specifically set forth, for example, in claim 1 which calls for an alloy which is characterized by the transformation between a "parent phase" and a "product phase". In contrast, Koizumi et al. do not report any shape

memory phase transformation whatsoever in their alloys over a broad temperature range. For these reasons, it is believed that the claimed subject matter of the present application is not suggested by the subject matter of the reference. Reconsideration and withdrawal of the objection is therefore respectfully requested.

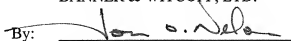
In paragraph 5 of the Office Action, claims 1, 2, 3, 8, 9 10 and 16 were rejected on the basis of reference AD in the 1449 form, an article from the "Metallurgical and Materials Transactions" based upon a manuscript submitted on April 23, 2002. However, this manuscript only discloses relevant phase relations measurements of model alloys which do not exhibit shape memory phase transformation. As mentioned in the Example section of the application, these alloys are designed to stabilize the B2 phase against martensitic transformation, and the transformation temperature are too low ( $<-150^{\circ}\text{C}$ ) to be detected. Nonetheless, it is noted that with respect to this reference, the provisional application of the present utility application was filed within one year of the submission date; namely, March 25, 2004. It was filed by the co-inventors. The other named authors were not inventors. The fact is that the inventors are identified in the present application as set forth in the inventor's declaration. The publication lists individuals who performed services at the direction and within the control and supervision of the inventors. As such, it is believed that the reference is inapplicable to the subject matter presently claimed. To the extent a further declaration is required with respect to this information, applicants are prepared to present such a declaration.

In view of the foregoing, therefore, it is believed that the claims in their amended condition are allowable. Reconsideration and allowance thereof is therefore respectfully requested.

Respectfully submitted,

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